

Proven Safety Countermeasures, Every Day Counts, and MAP-21

Rick O. Drumm, P.E.

INMotion 2012 MPO Conference

October 17, 2012

Countermeasures, EDC & MAP-21

- “Highway Safety is a good thing.”
- Safety Countermeasures
 - Proven Safety Countermeasures
 - Other Countermeasures
- EDC
- MAP-21: Highway Safety
- Final Thoughts

But First...

My Summer Vacation

by Rick O. Drumm, P.E.









Clearance 13'-6"



5 MINUTE
RED LIGHT



SPEED
LIMIT
25




PUSH
BUTTON
TO
ACTIVATE

No Pedestrians
in Tunnel





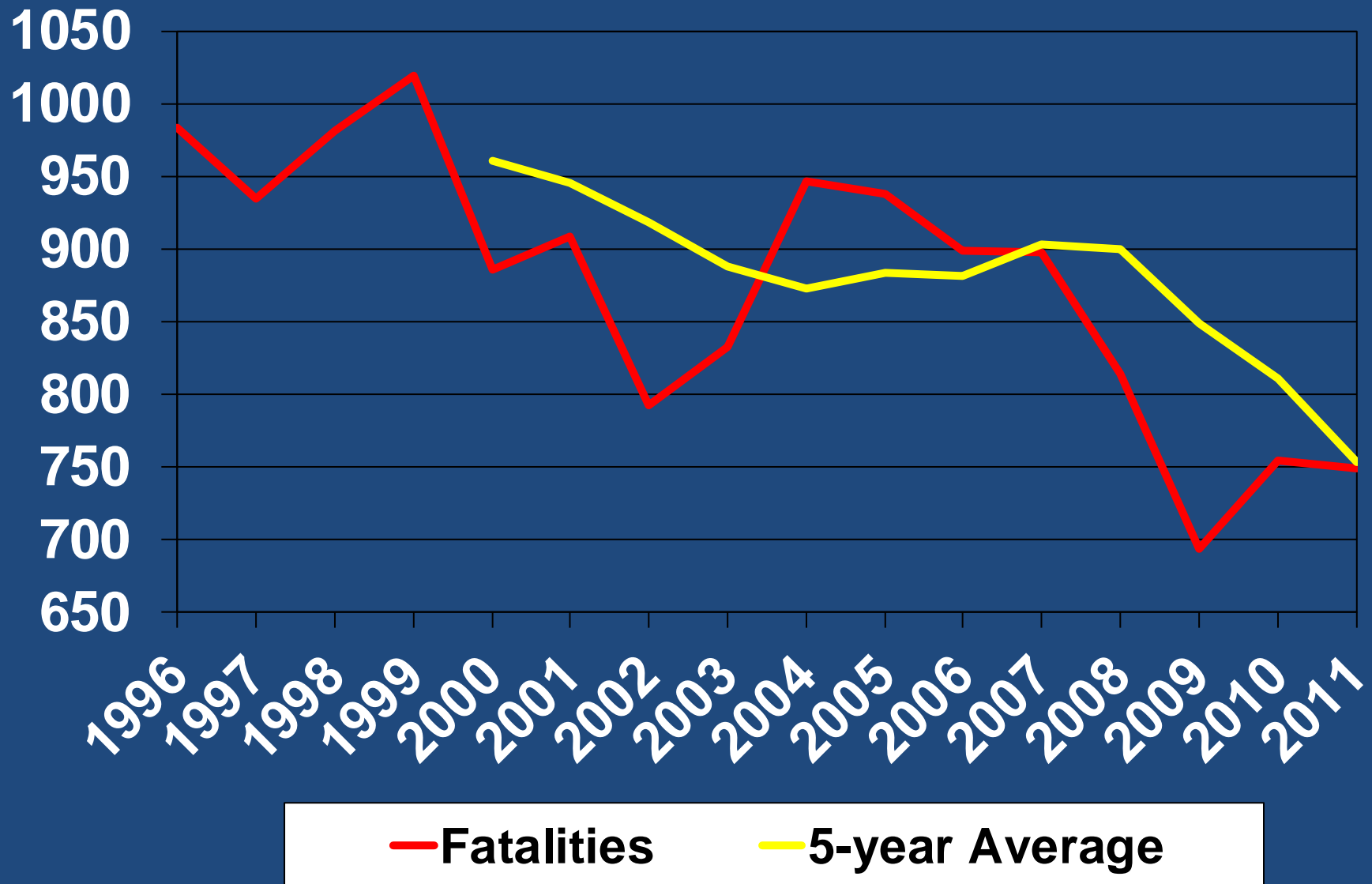
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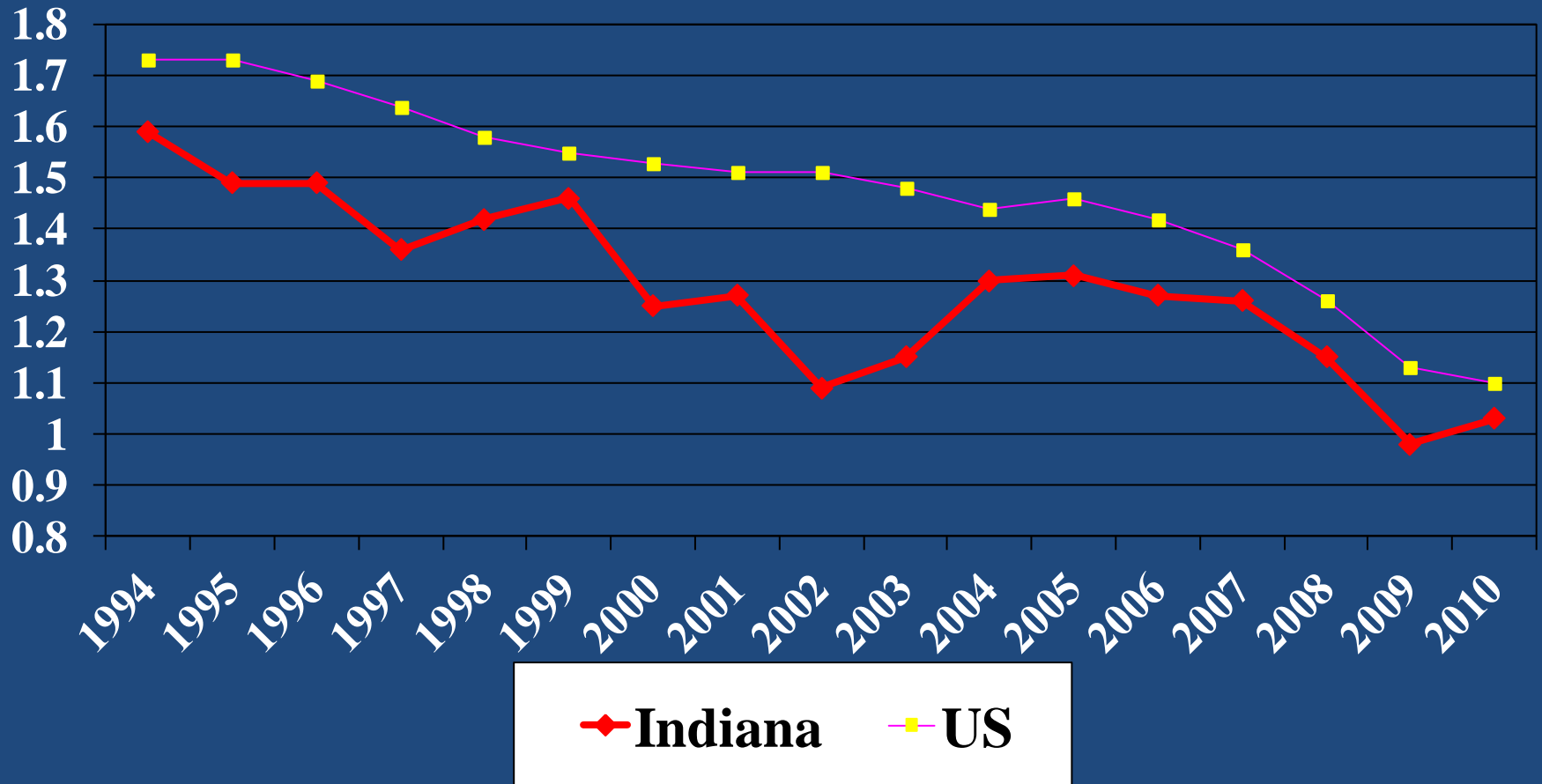
- Rick O. Drumm, P.E.

Indiana Highway Fatalities



Highway Fatality Rate National vs. Indiana

(fatalities per 100 MVMT)



Motor Vehicle Crashes is the leading cause of death for the following age groups:

- 4-7
- 8-15
- 16-20
- 21-24
- 25-34

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9 Proven Safety Countermeasures

1. Safety Edge
2. Roundabouts
3. Corridor Access Management
4. Backplates with Retroreflective Borders
5. Longitudinal Rumble Strip(e)s on 2-Lane Roads
6. Enhanced Delineation and Friction for H-Curves
7. Medians and Ped Xing Islands in Urban/Suburban
8. Pedestrian Hybrid Beacon
9. Road Diets

1. Safety Edge





Hendricks County





2. Roundabouts



A photograph of a roundabout in Valparaiso, Indiana. The foreground is a lush green lawn. A concrete sidewalk runs horizontally across the middle ground. In the background, a roundabout with a central island of dry grass and shrubs is visible. A white car is driving on the right side of the roundabout. Various road signs, including a yellow arrow sign pointing right, are visible. The sky is clear and blue.

Valparaiso



Noblesville





4. Backplates with Retroreflective Borders

LEFT
ON
ARROW
ONLY



Seaside
&
Memories
Flowers Gardens

McDonald's
6 Miles Ahead on Left

41 150

My's Automotives





Westfield



LEFT TURN
YIELD
ON GREEN

asAmerica

MarketStop

Unleaded

365.9

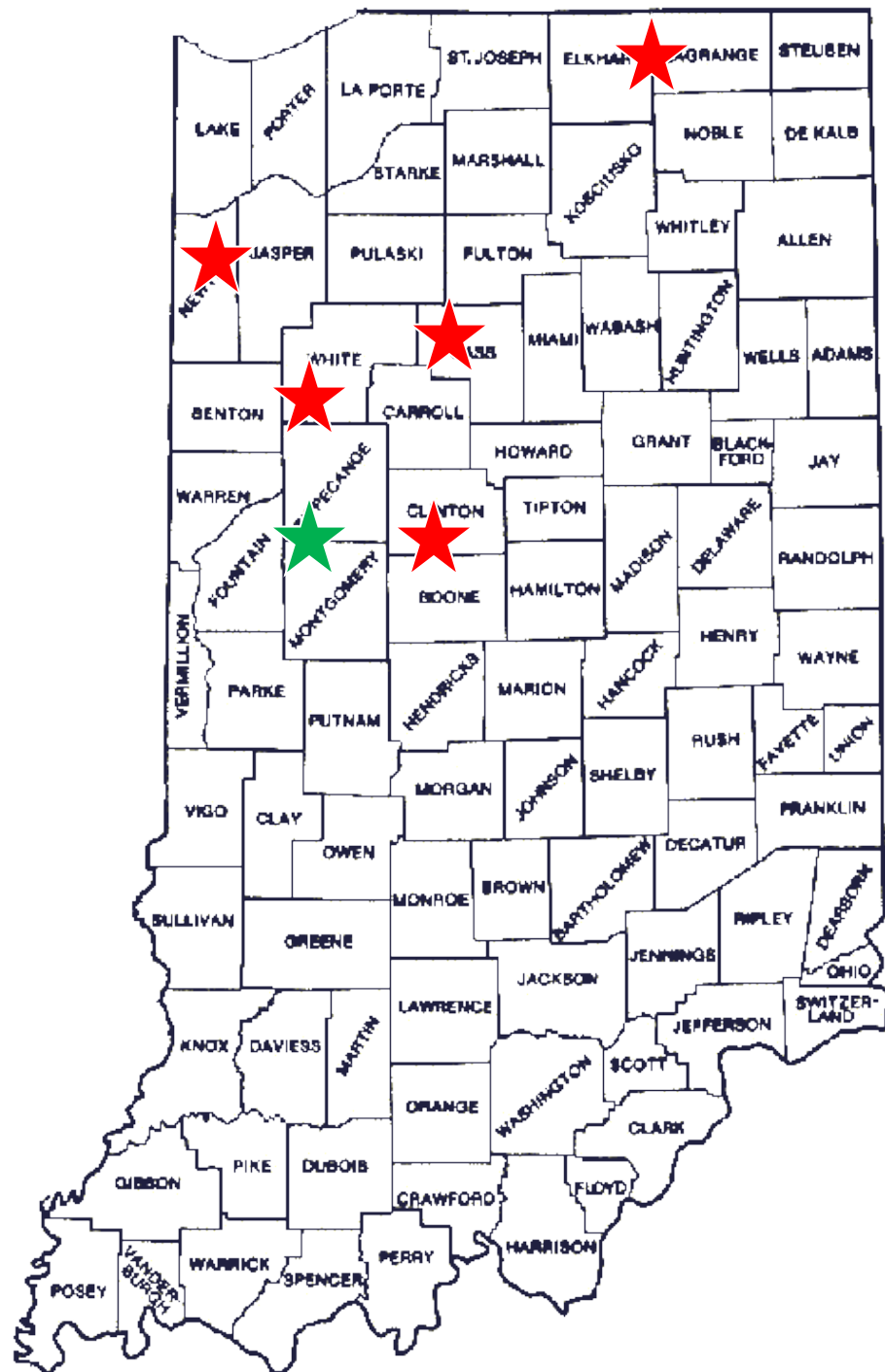


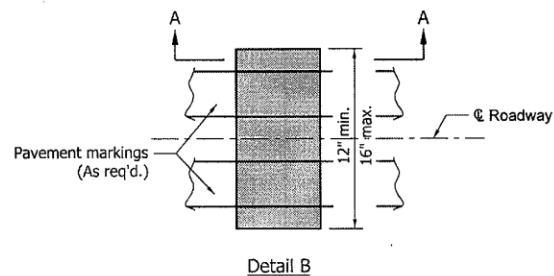
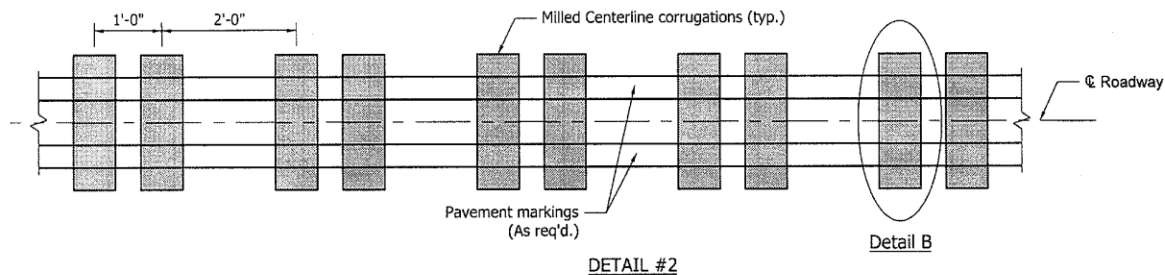
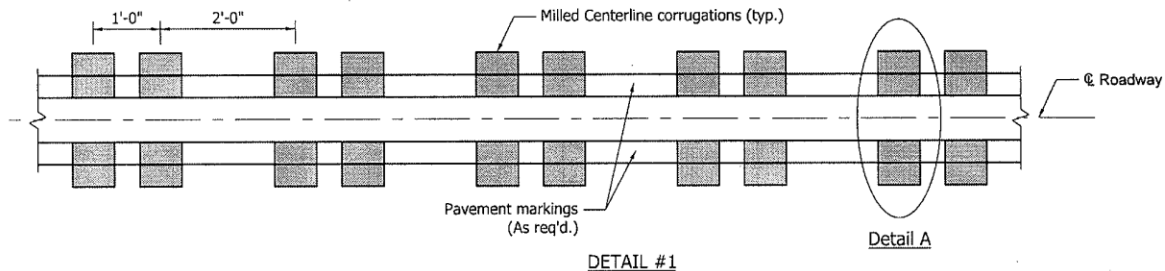


Bedford

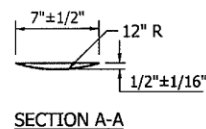
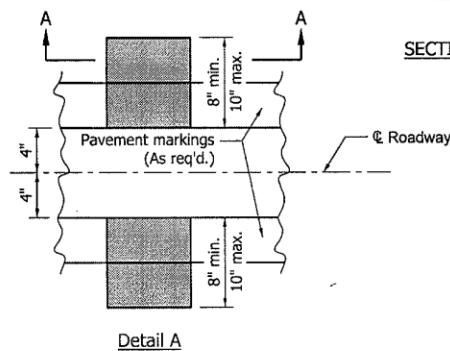
5. Longitudinal Rumble Strips and Stripes on 2-Lane Roads

- Centerline Rumble Strips
- Edgeline Rumble Strips (Rumble Stripes)





Note:
Center MCC about the Roadway Centerline.



Notes:

1. Place Milled Centerline Corrugations in accordance with the table below:

Roadway Description	Typical Drawing Detail
Roadway with 11 feet or greater lane width and minimum of 3 feet of paved shoulder.	Detail #1
Roadway with 11 feet lane width and less than 3 feet of paved shoulder.	Detail #2

2. See Sheet 2 of 2 for corrugation placement at intersections and driveways.

INDIANA DEPARTMENT OF TRANSPORTATION

MILLED CENTERLINE CORRUGATIONS, MCC



Clinton County









Cass County



A photograph of a paved road with a concrete curb and grass. The road is dark asphalt, and the curb is a light gray concrete. A thin orange line is painted along the edge of the road. The grass is green and appears to be in the background.

White County















6. Enhanced Delineation and Friction for Horizontal Curves







8. Pedestrian Hybrid Beacon

HAWK - High intensity Activated
crossWalk

2009 MUTCD Chapter 4F.
Pedestrian Hybrid Beacons





CROSSWALK
STOP
ON RED



ONE WAY

BUS



STOP

CROSSWALK
STOP
ON RED



9. “Road Diets” (Roadway Reconfiguration)



800

LINCOLN AVE





Before



After

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Cable Guardrail for Interstate Medians





RRFB

Rectangular Rapid Flash Beacon





Lake County





Columbus



Para cruzar la calle,
por favor presione el botón
rojo por dos segundos

1. Push Button To
Alert Motorist
2. Wait For Vehicles
To Stop
3. Cross Carefully
4. Thank The Driver

R.D. Jones'
Stop Experts, Incorporated



Innovation Through Imagination®



In-Pavement Flashing Lights at Crosswalks









All photos of 9PSC and other PSC
were taken in Indiana.

Cohort Time

4-6 people

No more than two colleagues

- Countermeasure you have seen in your MPO area.
- Countermeasure you would like to see in your MPO area.

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Every Day Counts (EDC)

Every Day Counts

Previous Safety Initiative

- Safety Edge

Every Day Counts 2!

New Safety Initiatives

- High Friction Surface Treatment (HFST)
- Intersection and Interchange Geometrics

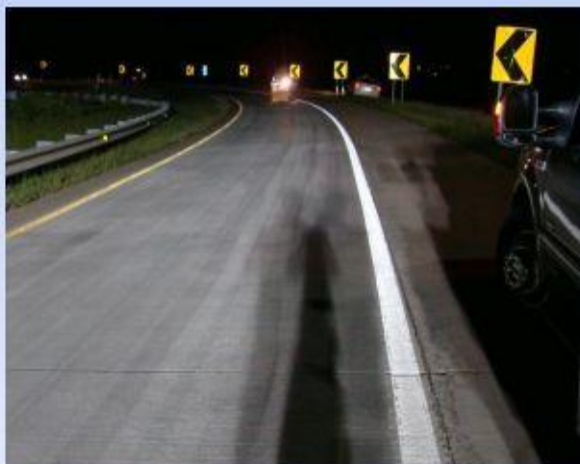
Every Day Counts 2!

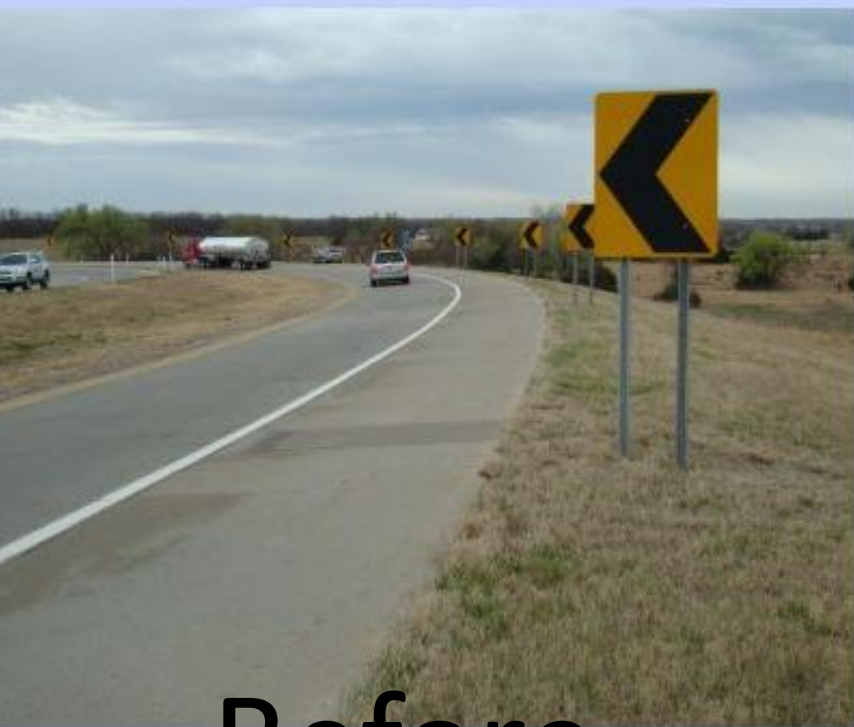
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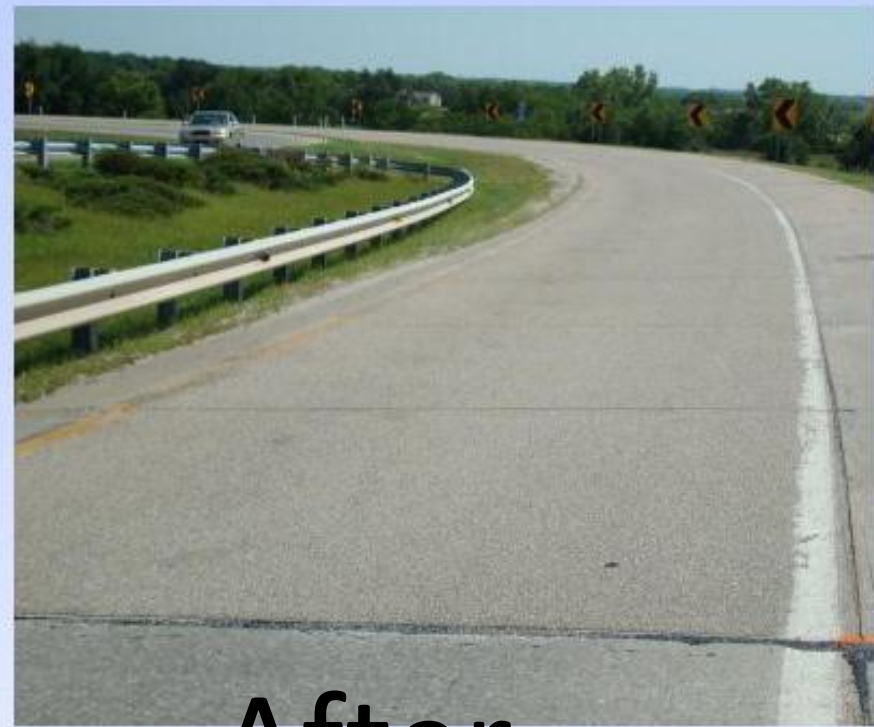








Before



After



<http://www.highfrictionroads.com/>

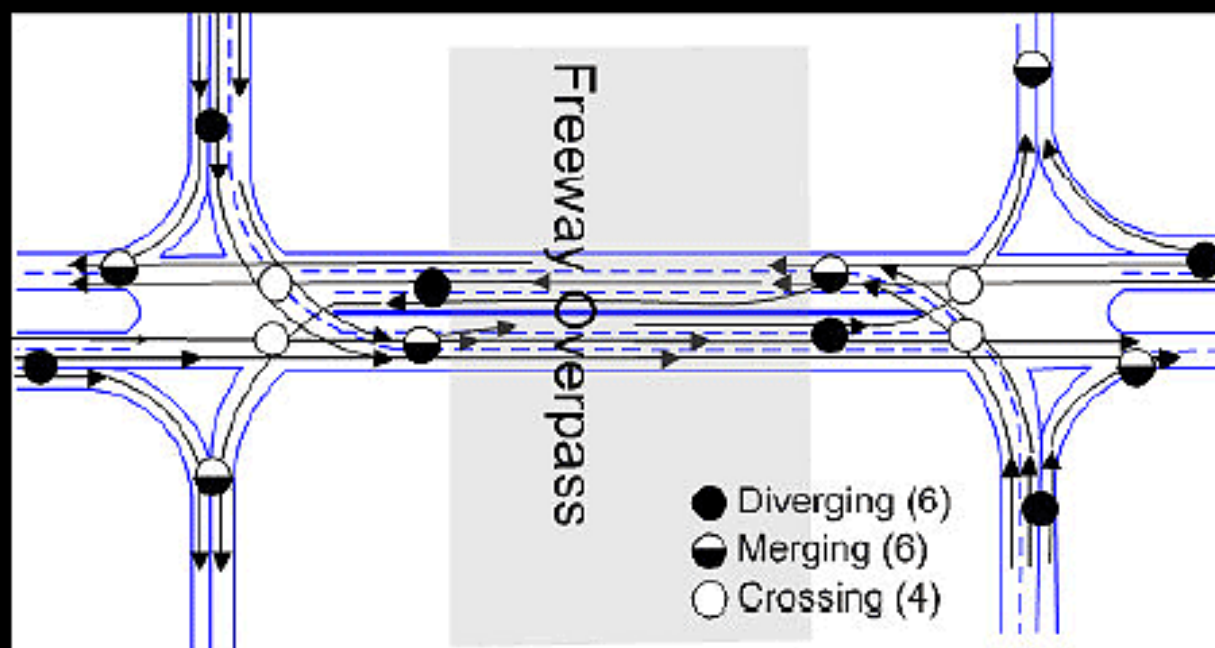
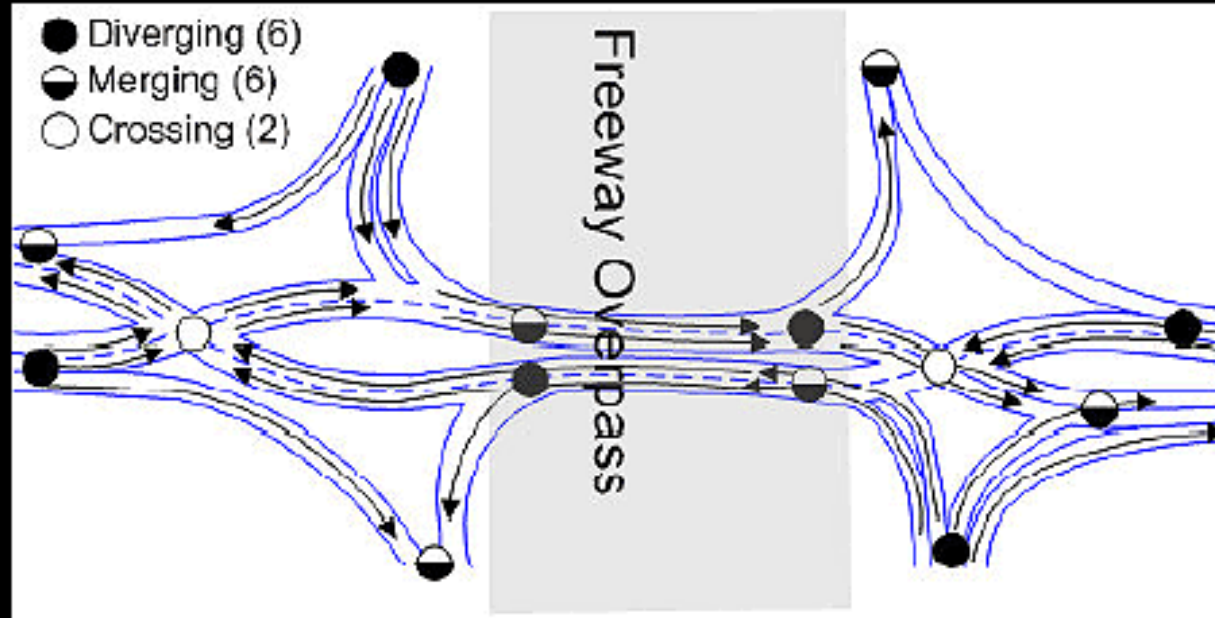
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Alternative Intersections and Interchanges

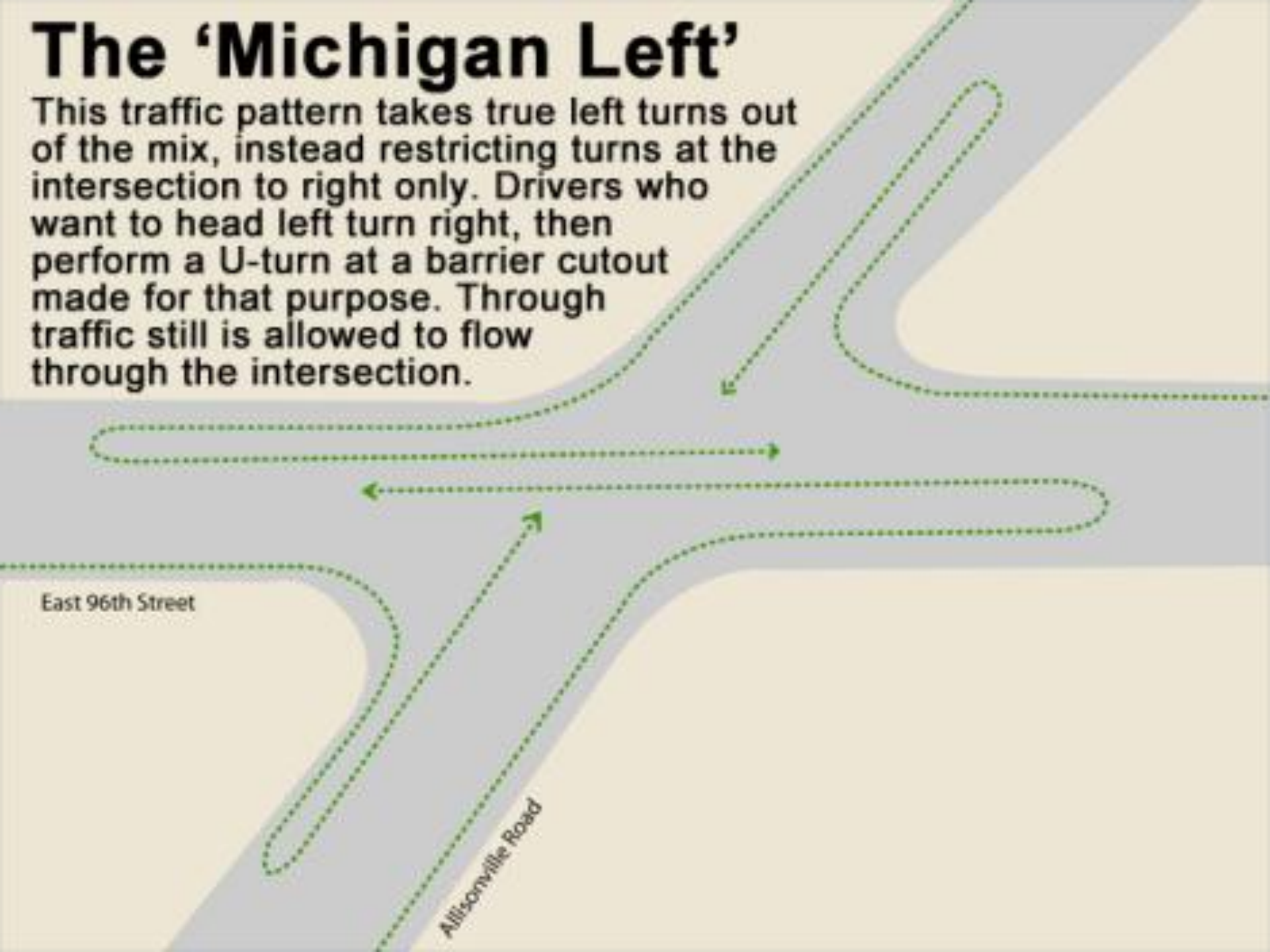
- Roundabouts
- Diverging Diamond Interchanges
- Intersections with displaced left-turns or variations on U-turns





The 'Michigan Left'

This traffic pattern takes true left turns out of the mix, instead restricting turns at the intersection to right only. Drivers who want to head left turn right, then perform a U-turn at a barrier cutout made for that purpose. Through traffic still is allowed to flow through the intersection.



96th Street at Allisonville Road
Intersection Improvement



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MAP-21

The Background





"Anyone who thinks it's going to get better after this next election, you're smoking the funny weed because it's not going to happen."

House Transportation and Infrastructure
Committee Chair

John Mica

at AASHTO Legislative Meeting, February, 2012

SAFETEA-LU → MAP-21

- HSIP

• HSIP

– HRRR

– HWY-RR X-ing

– HRRR if needed

- HWY-RR X-ing

- SRTS

Transportation
Alternatives

Preliminary Funding Report for Indiana in SAFETEA-LU HSIP only for FY06-FY12

	\$ Millions
Apportioned	198.1
Obligated	128.0

Obligation Rate = 64.6%

Transferred out of HSIP = \$35.3million

Safety Funding (**approx.**) for Indiana in MAP-21

	HSIP	HWY-RR	HRRR	SRTS
FY2012 (SAFETEA-LU)	29.73 (after HRRR setaside)	6.78	1.65 (setaside of HSIP)	3.55
FY2013 (MAP-21)	53.48 (after HWY-RR setaside)	7.32	I/N	N/A
FY2014 (MAP-21)	52.73 (after HWY-RR setaside)	7.32	I/N	N/A

>79% increase in HSIP funding

Penalty Transfer Funds

- 154 Open Container
- 164 Repeat Offender

Safety in MAP-21

- FY12 to FY13 - >79% increase in funding + Penalty Transfers from reassessment
- Provisions for HRRR and Older Driver
- SHSP revisions – cycle decided by “Secretary”
- More requirements, emphasis, and allowance for HSIP funds in data collection (crash and roadway) and analysis
- All public roads, all types of crashes
- Closer working with education and enforcement
- Safety Performance initiated
- Transfer still allowed

www.fhwa.dot.gov/MAP21/

MAP-21

Moving Ahead for Progress in the 21st Century

- Summary
- Q & A
- Fact Sheets
- Presentations
- Legislation
- Funding Tables
- Webinars
- Guidance

MAP-21, the Moving Ahead for Progress in the 21st Century Act (P.L. 112-141), was signed into law by President Obama on July 6, 2012. Funding surface transportation programs at over \$105 billion for fiscal years (FY) 2013 and 2014, MAP-21 is the first long-term highway authorization enacted since 2005.

MAP-21 is a milestone for the U.S. economy and the Nation's surface transportation program. By transforming the policy and programmatic framework for investments to guide the system's growth and development, MAP-21 creates a streamlined and performance-based surface transportation program and builds on many of the highway, transit, bike, and pedestrian programs and policies established in 1991.

Recently Added

- 9/25 - [Guidance Documents](#)
- 9/25 - [Expanded Questions & Answers](#)

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Let me explain. No, there is too much. Let me sum up...

- “Highway Safety is a good thing.”
- Use the 9 PSC. Use other PSC.
- Consider High Friction Surface Treatments and innovative Intersection and Interchange Geometrics (EDC).
- More emphasis on Safety in MAP-21

----Stay Tuned!

Cause Safety